



IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Stephen V. Deckers

Confirmation No.: 7095

Application No.: 10/788,543

Examiner: Khoi H. Tran

Filing Date: Feb. 27, 2004

Group Art Unit: 3651

Title: Disk Cartridge Data Storage Methods and Apparatus

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on July 16, 2005.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

() (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

| | |
|------------------|-----------|
| () one month | \$120.00 |
| () two months | \$450.00 |
| () three months | \$1020.00 |
| () four months | \$1590.00 |

() The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **08-2025** the sum of \$500.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

(X) I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450. Date of Deposit: Sept. 15, 2005
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() I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number _____ on _____

Number of pages:

Typed Name: Thomas Olson

Signature: Thomas Olson

Respectfully submitted,

Stephen V. Deckers

By Thomas Olson

Thomas Olson

Attorney/Agent for Applicant(s)

Reg. No. **44,271**

Date: **Sept. 15, 2005**

Telephone No.: **(509) 327-4748**



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PATENT APPLICATION
Docket No.: 10004377-4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND
INTERFERENCES

In re application of:

Inventor(s): Stephen V. Deckers
Serial No.: 10/788,543
Filed: February 27, 2004
Title: DISK CARTRIDGE DATA STORAGE METHODS AND APPARATUS
Art Unit: 3651
Examiner: Khoi H. Tran
Confirmation No.: 7095

Mail Stop APPEAL BRIEF – PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

SIR OR MADAM:

This communication is the Appeal Brief in this application with respect to the Notice of Appeal filed on July 16, 2005. This Appeal Brief is being filed under the provisions of 37 C.F.R. § 41.37. The filing fee for filing this Appeal Brief, as set forth in 37 C.F.R. § 1.17(c), is included herewith as indicated on the attached Transmittal of Appeal Brief.

(Continued on next page.)

Docket No. 10004377-4
Appeal Brief

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1. Real Party In Interest:

The real party in interest is Hewlett Packard Development Company, L.P. of Houston, Texas.

2. Related Appeals and Interferences:

The Appellant has filed an appeal in a related case which is identified as U.S. Patent Application Number 10/656,040, and which was filed on 09/04/2003. The instant case now being appealed is a continuation application claiming the benefit of priority based on the above-identified related application. No decision has been rendered by any court or by the Board in any proceeding identified under this paragraph. There are no other appeals or interferences known to Appellant, the Appellant's legal representative, or assignee which will directly affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

3. Status of the Claims:

The following list provides the status of all the claims in the application:

Claims 1-20: cancelled;

Claim 21: rejected – currently on appeal;

Claims 22-23: withdrawn;

Claim 24: rejected – currently on appeal;

Claim 25: withdrawn;

Claims 26-28: rejected – currently on appeal;

Claims 29-30: withdrawn;

Claim 31: rejected – currently on appeal;

Claim 32: withdrawn.

4. Status of Amendments:

No amendments to the claims were made or entered after the final rejection.

5. Summary of Claimed Subject Matter:

The following summary corresponds to independent claim 21. Discussions about elements and recitations can be found at least at the cited locations in the specification and drawings. A storage media (110) includes a housing or shell (111)

that has a tape cartridge form factor suitable for use with a mechanical picker or automated tape handling device (210). Specific standardized tape cartridge form factors are known to those in the art. A hard disk drive (113, 115) is contained within the housing (111). Furthermore, a cartridge interface (121) is coupled to the hard disk drive (113, 115) and adapted to removably connect the hard disk drive to a docking device (130, 330). (Specification at page 5, line 16 through page 19, line 18, and figures 1-4.)

The following summary corresponds to independent claim 26. Discussions about elements and recitations can be found at least at the cited locations in the specification and drawings. A storage media (110) includes an exterior cartridge shell (111) shaped to have a tape cartridge form factor. Specific standardized tape cartridge form factors are known to those in the art. The cartridge shell (111) is adapted to be gripped and moved with a robotic gripper or automated tape handling device (210) to connect with a docking device (130, 330). A hard disk (113) is contained within the cartridge shell (111). A cartridge interface (121) is coupled with the hard disk (113) and is adapted to connect to the docking device (130, 330) and communicatively link with a host device (140). (Specification at page 5, line 16 through page 19, line 18, and figures 1-4.)

6. Grounds of Rejection to be Reviewed on Appeal:

(A). Whether claims 21 and 24 are unpatentable under 35 U.S.C. § 103 over Kulakowski (6,731,455) in view of Stefansky (5,329,412).

(B). Whether claims 26, 27, 28, and 31 are unpatentable under 35 U.S.C. § 103 over Kulakowski in view of Stefansky.

7. Argument:

(A). Whether claims 21 and 24 are unpatentable under 35 U.S.C. § 103 over Kulakowski (6,731,455) in view of Stefansky (5,329,412).

Claims 21 and 24 have been rejected under 35 U.S.C. § 103 as being unpatentable over Kulakowski (6,731,455) in view of Stefansky (5,329,412). Claim 24 depends from claim 21 and therefore includes all of the elements and/or limitations of claim 21.

The Examiner contends that Kulakowski discloses all of the limitations of claim 21 except for a hard disk drive device (HDD) having a tape cartridge form factor. The Examiner also contends that Stefansky discloses a portable HDD, and that Stefansky teaches that the HDD housing can have the “dimensions of a tape cartridge.” The Examiner contends further that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the housing dimension of Kulakowski coincide with the housing dimension of a magnetic tape cartridge as taught by Stefansky since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art, and that it would have been obvious for one of ordinary skill in the art to have provided Kulakowski with a housing having the same dimensions of a magnetic tape housing because such HDD cover had been known in the art, as demonstrated by Stefansky.

The Appellant disagrees with the Examiner’s assessment of claim 21 in view of the prior art, and contends that not all of the required elements of a *prima facie* case of obviousness (as set forth in MPEP 2142) have been established with respect to claim 21.

Specifically, the Appellant contends at least that:

- 1) the references do not teach or suggest all the claim limitations; and,
- 2) there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings.

What Kulakowski ('455) Discloses:

The Appellant notes that Kulakowski specifically teaches the use of a symmetrical, dual-ended hard disk cartridge (in which the data storage media can be accessed from two opposite ends) designed to be used in a commercial library system with a picker that can grip and/or access the cartridge. For example, Kulakowski in the locations noted, reads as follows:

In the described implementations, the storage device comprised a dual-end hard disk drive. In alternative implementations, the storage device may comprise any storage device known in the art maintained in a housing that provides non-volatile storage of data that can be accessed

from different locations or ends on the housing including the storage medium ... such as an electronic storage device, etc.” (Kulakowski, col. 11, line 63, through col. 12, line 6, emphasis added.)

5 [B]ecause the disk drives are dual-end, they can be swapped between pickers without the need to rotate the hard disk drive or interrupt the I/O flow. For instance, when swapping a dual-end hard disk drive between pickers, both pickers can be
10 engaged with the data interfaces at opposite [ends] of the hard disk drive. This allows pickers to swap a hard disk drive and time the disengagement of one picker to minimize any interruption to data flow. Pickers on the same track may also swap hard disk drives to avoid collisions. Still further, the dual-
15 end hard disk drives would not have to be rotated in either an Input/Output station or pass-through station between library modules because they may be engaged from either end. (Kulakowski, col. 11, lines 7-19.)

20 That is, Kulakowski teaches a commercial data storage library system with a picker that is configured to be used only with dual-ended cartridges, wherein the cartridge is substantially symmetrical such that each of the two ends has a power connector and a data connector, and that the two ends are essentially identical to each other. In this manner, the dual-ended cartridge of Kulakowski can be gripped and/or
25 accessed by the picker from either end, as specifically taught by Kulakowski.

The Examiner states that, “Kulakowski is silent as to the specifics of the HDD having a form factor in the shape of a tape cartridge.” The Appellant agrees with the Examiner that Kulakowski does not disclose a tape cartridge form factor.

30 **What Stefansky ('412) Discloses:**

Stefansky discloses no more than a disk drive for use in laptop and notebook computers and having an asymmetrical cover that has one rounded, or bulging, end and an opposite flat end and that has a height of 0.6 inch. (Stefansky, col. 1, lines 56-61.)

Stefansky teaches that the disclosed disk drive is connected to a computer by way of a printed circuit board that is mounted on the exterior of the disk drive cover, wherein the circuit board has a connector at one end. (Stefansky, col. 3, lines 53-59, and figures 1 and 5.) Stefansky does not teach or suggest that the disclosed disk drive is, and/or is in the form of, a cartridge, nor does Stefansky teach or suggest a tape cartridge form factor. (See Stefansky, abstract, and col. 1, line 1 through col. 8, line 26.)

Analysis:

The rejection of claim 21 is based on the Examiner's contention that "Stefansky teaches that the hard disk drive device housing can have the dimension of a tape cartridge." The Appellant notes with particularity, the precise language used by the Examiner in making the rejections. Specifically, the Examiner uses the term, dimension of a tape cartridge.

The Appellant argues that the term "dimension of a tape cartridge" used by the Examiner is not equivalent to the term "tape cartridge form factor," which is used by the Appellant in claim 21.

More specifically, the Examiner contends that Stefansky teaches that "the hard disk drive device housing can have the dimension of a tape cartridge." On the other hand, the Appellant claims in claim 21, "a housing having a tape cartridge form factor suitable for use with a mechanical picker and a hard disk drive contained within the housing."

The Appellant notes that words of a patent must be given their plain meaning (see MPEP 2111.01: Claim terms have ordinary and custom meaning per one of ordinary skill in the art.). In this regard, Webopedia (www.webopedia.com) is an online dictionary dedicated to defining computer technology. Per Webopedia, the term "form factor" means: "The physical size and shape of a device." Thus, the term "tape cartridge form factor" means both size **and** shape of a tape cartridge.

Stefansky merely discloses a hard disk drive having a cover that has only one dimension (i.e., the height) of a tape cartridge. (Stefansky, col. 1, lines 60-61.) Stefansky does not disclose a hard disk drive that has both the size **and** shape of a tape cartridge (i.e. a tape cartridge form factor).

The Appellant notes that Stefansky does mention the term “form factor.” (Stefansky, abstract, and col. 2, line 27.) However, Stefansky does not mention or otherwise disclose a disk drive having a **tape cartridge form factor**. (See Stefansky, col. 1, line 56 through col. 8, line 26.) That is, Stefansky uses the term “form factor” in the context of a **disk drive form factor**, and not in the context of a **tape cartridge form factor**. (See Stefansky, col. 2, lines 25-35.) The concept of a “disk drive form factor” is not equivalent to the term “tape cartridge form factor.” Therefore, even though the term “form factor” is mentioned by Stefansky, it is clear that Stefansky does not disclose **“a housing having a tape cartridge form factor suitable for use with a mechanical picker and a hard disk drive contained within the housing”** as is required by claim 21.

Further, the fact that a given hard disk drive cover has a certain “dimension” of a tape cartridge does not imply that the given hard disk drive cover is either itself in the form of a cartridge, or that it is **“suitable for use with a mechanical picker”** as is claimed by the Appellant. In fact, Stefansky does not teach or suggest that the disclosed hard disk drive cover is in the form of a cartridge, or that the cover is suitable for use with any type of picker or gripper. Moreover, as mentioned above, Stefansky teaches that a printed circuit board is mounted to the exterior of the hard disk drive cover, and that a connector is mounted on the circuit board. In other words, the hard disk drive disclosed by Stefansky is not, in fact, in the form of a cartridge, and is not suitable for use with a mechanical picker, as is required by claim 21 because the externally mounted circuit board would be damaged if gripped by a picker.

Additionally, the Appellant maintains that the Examiner is misconstruing what Kulakowski discloses. The Examiner contends that Kulakowski discloses “a storage library capable of handling tape cartridges or a combination of tape and hard disk drive devices” (the Examiner cites column 11, lines 21-47 of Kulakowski).

The Appellant respectfully disagrees with the Examiner’s contention that Kulakowski teaches the use of tape cartridges. The passage of Kulakowski cited by the Examiner as disclosing the use of tape cartridges (col. 11, lines 21-47) in fact **does not** disclose or suggest the use of tape cartridges. On the contrary, the cited passage only teaches that “[t]he preferred embodiments may be implemented as [an] ... article of manufacture [wherein] the term ‘article of manufacture’ as used herein refers to **code or logic implemented in** ... a computer readable medium (e.g. magnetic storage medium, hard disk drives, floppy disks, tape, etc.)” (Emphasis added.) Thus, the

passage merely teaches that embodiments in Kulakowski can be in the form of programming code or logic for an operating system that is stored on a length of tape.

The cited passage does not teach or suggest in any way the use of tape cartridges as storage media for use with the library system.

5 The Examiner argues the following points in regard to motivation to combine the references:

- 1) that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the housing dimension of Kulakowski coincide with the housing dimension of a magnetic tape cartridge, as taught be Stefansky since it has been held that discovering an optimum value of a resultant effective variable involves only routine skill in the art;" and,
- 10 2) that "it would have been obvious for one of ordinary skill in the art to have provided Kulakowski with a housing having the same dimensions of a magnetic tape housing because such HDD cover had been known in the art, as demonstrated by Stefansky."
- 15

In regard to the Examiner's first point above, the Appellant argues the following:

- A) a housing dimension of a cartridge, in the context set forth in the cited references, can not be considered a "result effective variable" because there is no teaching in the references of any experimental data, nor any teaching of "discovery of optimum ranges" nor any teaching of "variables" and/or anything that is "variable;" and,
- 20 B) even if a housing dimension of a cartridge could be considered a "result effective variable," and even if the references did teach optimization of a result effective variable, there is no teaching in the references that such non-existent variables are known to be result effective. In order for a claimed parameter to be deemed the result of obvious experimentation, any such experimentation must have come from within the teachings of the art. (In re Waymouth, 449 F.2d 1273, 1276, 182 USPQ 290, 292 (CCPA 1974).)
- 25

The Appellant contends, therefore, that the Examiner's first point is erroneous.

30 In regard to the Examiner's second point above, the Appellant argues the following:

The simple fact that two teachings are known in the art (upon which the Examiner's second point relies) is insufficient to establish motivation to combine the two

5 teachings to render a claim obvious. Specifically, a statement that modifications of the prior art to meet the claimed invention would have been well within the ordinary skill of the art at the time the claimed invention was made because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. (MPEP 2143.01.) Moreover, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. (Id.) The Appellant contends, therefore, that the Examiner's second point is erroneous.

10 Furthermore, because the teachings of Kulakowski depend upon the use of symmetrical, dual-ended cartridge configured to be gripped by a picker, it follows that Kulakowski teaches away from the features of the asymmetrical, single-ended non-cartridge disk drive taught by Stefansky. That is, to modify the cartridge of Kulakowski to have one or more features of the disk drive of Stefansky would change the principle of operation of the Kulakowski device and/or would render the Kulakowski device unsatisfactory for its intended purpose. Thus, it follows that there is no motivation to combine the teachings of Kulakowski and Stefansky, as is required for *prima facie* obviousness. (See MPEP 2143.01.)

20 **The References Do Not Teach All the Claim Limitations:**

The Appellant argues, in view of the above analysis, that the Examiner has not established that the prior art references teach or suggest a housing having a tape cartridge form factor suitable for use with a mechanical picker, and a hard disk drive contained within the housing, as is required by claim 21. That is, the cited references (Kulakowski and Stefansky) do not teach or suggest all of the claim limitations, as is required to establish *prima facie* obviousness. Rather, Kulakowski discloses no more than a hard disk cartridge that does not have a tape cartridge form factor, and Stefansky discloses no more than a hard disk drive that neither is a cartridge, nor has a tape cartridge form factor, nor is configured to be gripped by a picker.

30 **No Motivation to Combine Reference Teachings:**

The Appellant also argues, in view of the above analysis, that the Examiner has not established that there exists any suggestion or motivation, either in the references

themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings as required to establish *prima facie* obviousness.

That is, the Appellant argues that there is no motivation in the prior art to combine features of the non-cartridge laptop disk drive having an exterior printed circuit board as taught by Stefansky with the features of the dual-ended symmetrical commercial library cartridge configured to be gripped by a picker as taught by Kulakowski. In other words, there is no motivation, reason, or advantage for modifying the cartridge of Kulakowski to have a dimension of the non-cartridge hard disk drive of Stefansky, as is proposed by the Examiner.

Therefore: for at least the reasons set forth in the above analysis and discussion, the Appellant contends that not all of the requirements for a *prima facie* case of obviousness have been established in regard to claim 21. Accordingly, the Appellant respectfully requests that the final rejections of claim 21 and claim 24, which depends from claim 21, be withdrawn and that those claims be allowed.

(B). Whether claims 26, 27, 28, and 31 are unpatentable under 35 U.S.C. § 103 over Kulakowski in view of Stefansky.

Claims 26, 27, 28, and 31 have been rejected under 35 U.S.C. § 103 as being unpatentable over Kulakowski (6,731,455) in view of Stefansky (5,329,412). Claims 27, 28, and 31 depend from claim 26 and therefore include all of the elements and/or limitations of claim 26.

The Examiner contends that Kulakowski discloses all of the limitations of claim 26 except for a hard disk drive device (HDD) having a tape cartridge form factor. The Examiner also contends that Stefansky discloses a portable HDD, and that Stefansky teaches that the HDD housing can have the “dimensions of a tape cartridge.” The Examiner contends further that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the housing dimension of Kulakowski coincide with the housing dimension of a magnetic tape cartridge as taught by Stefansky since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art, and that it would have been obvious for one of ordinary skill in the art to have provided Kulakowski with a housing

having the same dimensions of a magnetic tape housing because such HDD cover had been known in the art, as demonstrated by Stefansky.

The Appellant disagrees with the Examiner's assessment of claim 26 in view of the prior art, and contends that not all of the required elements of a *prima facie* case of obviousness (as set forth in MPEP 2142) have been established with respect to claim 26.

Specifically, the Appellant contends that:

- 1) the references do not teach or suggest all the claim limitations; and,
- 2) there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings.

What Kulakowski ('455) Discloses:

Kulakowski is described in detail in the above argument with respect to claim 21.

What Stefansky ('412) Discloses:

Stefansky is described in detail in the above argument with respect to claim 21.

Analysis:

The Appellant notes that claim 26 includes at least some limitations that are similar to at least some of the limitations of claim 21, with at least one difference being the specific terminology employed in each claim.

Specifically, claim 21 requires a housing having a **tape cartridge form factor** suitable for use with a mechanical picker, while claim 26 requires an exterior cartridge shell shaped to have a **tape cartridge form factor**, the cartridge shell adapted to be gripped and moved with a robotic gripper to connect with a docking device.

The Appellant notes further that, as with respect to claim 21, the rejection of claim 26 is based on the Examiner's contention that "Stefansky teaches that the hard disk drive device housing can have the dimension of a tape cartridge." The Appellant again notes with particularity, the precise language used by the Examiner in making the rejections. Specifically, the Examiner uses the term, **dimension of a tape cartridge**.

That is, the Examiner contends that Stefansky teaches that "the hard disk drive device housing can have the **dimension of a tape cartridge**." On the other hand, the

Appellant claims in claim 26, "an exterior cartridge shell shaped to have a **tape cartridge form factor**, the cartridge shell adapted to be gripped and moved with a robotic gripper to connect with a docking device, and a hard disk contained within the cartridge shell." The Appellant again argues that the term "dimension of a tape cartridge" is not equivalent to the term "tape cartridge form factor," which is used by the Appellant in claim 26.

Additionally, as with respect to claim 21, the Appellant notes that words of a patent must be given their plain meaning (see MPEP 2111.01: Claim terms have ordinary and custom meaning per one of ordinary skill in the art.). In this regard, Webopedia (www.webopedia.com) is an online dictionary dedicated to defining computer technology. Per Webopedia, the term "form factor" means: "The physical size and shape of a device." Thus, the term "tape cartridge form factor" means both size and shape of a tape cartridge.

As is discussed above, Stefansky merely discloses a hard disk drive having a cover that has only one dimension (i.e., the height) of a tape cartridge. (Stefansky, col. 1, lines 60-61.) Stefansky does not disclose a hard disk drive that has both the size and shape of a tape cartridge (i.e. a tape cartridge form factor).

The Appellant notes that Stefansky does mention the term "form factor." (Stefansky, abstract, and col. 2, line 27.) However, Stefansky does not mention or otherwise disclose a disk drive having a **tape cartridge form factor**. (See Stefansky, abstract, and col. 1, line 56 through col. 8, line 26.) That is, Stefansky uses the term "form factor" in the context of a disk drive form factor, not in the context of a tape cartridge form factor. (See Stefansky, col. 2, lines 25-35.) The term "disk drive form factor" is not equivalent to the term "tape cartridge form factor." Therefore, even though the term "form factor" is mentioned by Stefansky, it is clear that Stefansky does not disclose "an exterior cartridge shell shaped to have a **tape cartridge form factor**, the cartridge shell adapted to be gripped and moved with a robotic gripper to connect with a docking device", as is required by claim 26.

Further, the fact that a given hard disk drive cover has a certain "dimension" of a tape cartridge does not imply that the given hard disk drive cover is either itself in the form of a cartridge or cartridge shell, or that it is "adapted to be gripped and moved with a robotic gripper" as is claimed by the Appellant in claim 26. In fact, Stefansky does not teach or suggest that the disclosed hard disk drive cover is in the form of a cartridge,

or that the cover is suitable for use with any type of picker or gripper. Moreover, as mentioned above, Stefansky teaches that a printed circuit board is mounted to the exterior of the hard disk drive cover, and that a connector is mounted on the circuit board. In other words, the hard disk drive disclosed by Stefansky is not, in fact, in the form of a cartridge, and is not adapted to be gripped and moved with a robotic gripper, as is required by claim 26.

Additionally, the Appellant maintains that the Examiner is misconstruing what Kulakowski discloses. The Examiner contends that Kulakowski discloses “a storage library capable of handling tape cartridges or a combination of tape and hard disk drive devices” (the Examiner cites column 11, lines 21-47 of Kulakowski).

The Appellant respectfully disagrees with the Examiner’s contention that Kulakowski teaches the use of tape cartridges. The passage of Kulakowski cited by the Examiner as disclosing the use of tape cartridges (col. 11, lines 21-47,) in fact does not disclose or suggest the use of tape cartridges. On the contrary, the cited passage only teaches that “[t]he preferred embodiments may be implemented as [an]...article of manufacture [wherein] the term ‘article of manufacture’ as used herein refers to code or logic implemented in ... a computer readable medium (e.g. magnetic storage medium, hard disk drives, floppy disks, tape, etc.)” (Emphasis added.) Thus, the passage merely teaches that embodiments in Kulakowski can be in the form of programming code or logic for an operating system that is stored on a length of tape. The cited passage does not teach or suggest in any way the use of tape cartridges as storage media for use with the library system.

As is already argued above with respect to claim 21, the Examiner argues the following points in regard to motivation to combine the references:

- 1) that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the housing dimension of Kulakowski coincide with the housing dimension of a magnetic tape cartridge, as taught be Stefansky since it has been held that discovering an optimum value of a resultant effective variable involves only routine skill in the art;” and,
- 2) that “it would have been obvious for one of ordinary skill in the art to have provided Kulakowski with a housing having the same dimensions of a magnetic tape housing because such HDD cover had been known in the art, as demonstrated by Stefansky.”

In regard to the Examiner's first point above, the Appellant argues the following:

A) a housing dimension of a cartridge, in the context set forth in the cited references, can not be considered a "result effective variable" because there is no teaching in the references of any experimental data, nor any teaching of "discovery of optimum ranges" nor any teaching of "variables" and/or anything that is "variable;" and,

B) even if a housing dimension of a cartridge could be considered a "result effective variable," and even if the references did teach optimization of a result effective variable, there is no teaching in the references that such non-existent variables are known to be result effective. In order for a claimed parameter to be deemed the result of obvious experimentation, any such experimentation must have come from within the teachings of the art. (In re Waymouth, 449 F.2d 1273, 1276, 182 USPQ 290, 292 (CCPA 1974).)

The Appellant contends, therefore, that the Examiner's first point is erroneous.

In regard to the Examiner's second point above, the Appellant argues the following:

The simple fact that two teachings are known in the art (upon which the Examiner's second point relies) is insufficient to establish motivation to combine the two teachings to render a claim obvious. Specifically, a statement that modifications of the prior art to meet the claimed invention would have been well within the ordinary skill of the art at the time the claimed invention was made because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. (MPEP 2143.01.) Moreover, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. (Id.) The Appellant contends, therefore, that the Examiner's second point is erroneous.

Furthermore, because the teachings of Kulakowski depend upon the use of symmetrical, dual-ended cartridge configured to be gripped by a picker, it follows that Kulakowski teaches away from the features of the asymmetrical, single-ended non-cartridge disk drive taught by Stefansky. That is, to modify the cartridge of Kulakowski to have one or more features of the disk drive of Stefansky would change the principle of operation of the Kulakowski device and/or would render the Kulakowski device

unsatisfactory for its intended purpose. Thus, it follows that there is no motivation to combine the teachings of Kulakowski and Stefansky, as is required for *prima facie* obviousness. (See MPEP 2143.01.)

5 **The References Do Not Teach All the Claim Limitations:**

The Appellant argues, in view of the above analysis, that the Examiner has not established that the prior art references teach or suggest an exterior cartridge shell shaped to have a **tape cartridge form factor**, the cartridge shell adapted to be gripped and moved with a robotic gripper to connect with a docking device, and a hard disk
10 contained within the cartridge shell, as is required by claim 26. That is, the cited references (Kulakowski and Stefansky) do not teach or suggest all of the claim limitations of claim 26, as is required to establish *prima facie* obviousness.

No Motivation to Combine Reference Teachings:

15 The Appellant also argues, in view of the above analysis, that the Examiner has not established that there exists any suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings as required to establish *prima facie* obviousness. That is, the Appellant argues that there is no motivation in the
20 prior art to combine features of the non-cartridge laptop disk drive having an exterior printed circuit board as taught by Stefansky with the features of the dual-ended symmetrical commercial library cartridge configured to be gripped by a picker as taught by Kulakowski. More specifically, there is no motivation, reason, or advantage for modifying the cartridge of Kulakowski to have a dimension of the non-cartridge hard
25 disk drive of Stefansky, as is proposed by the Examiner.

Therefore: for at least the reasons set forth in the above analysis and discussion with respect to claim 26, the Appellant contends that not all of the requirements for a *prima facie* case of obviousness have been established in regard to claim 26. Accordingly,
30 the Appellant respectfully requests that the final rejections of claim 26, and of claim 27, 28, and 31, which depend from claim 26, be withdrawn and that those claims be allowed.

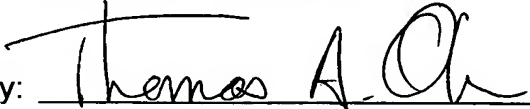
Summary

The Applicant respectfully considers claims 21, 24, 26-28, and 31 to be in condition for allowance, and respectfully requests the Board to overturn the final rejections of those claims, and further requests that those claims be allowed.

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Respectfully submitted,
Stephen V. DECKERS

Dated: September 15, 2005

By: 

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Thomas A. Olson
Attorney and agent for Applicant
Reg. No. 44,271
Phone: (509) 327-4748

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8. Claims Appendix:

Claims 1-20 (canceled).

- 5 Claim 21 (previously presented). A storage media, comprising:
a housing having a tape cartridge form factor suitable for use with a mechanical
picker;
a hard disk drive (HDD) contained within the housing; and,
a cartridge interface coupled to the HDD and adapted to removably connect the
10 HDD storage media to a docking device.

Claim 22 (withdrawn). The storage media of claim 21 wherein the tape cartridge form
factor is a Digital Audio Tape (DAT).

- 15 Claim 23 (withdrawn). The storage media of claim 21 wherein the tape cartridge form
factor is Digital Data Storage (DDS).

Claim 24 (previously presented). The storage media of claim 21 wherein the tape
cartridge form factor is a Digital Linear Tape (DLT).

- 20 Claim 25 (withdrawn). The storage media of claim 21 wherein the tape cartridge form
factor is a Linear Tape Open (LTO).

- Claim 26 (previously presented). A storage media, comprising:
25 an exterior cartridge shell shaped to have a tape cartridge form factor, the
cartridge shell adapted to be gripped and moved with a robotic gripper to connect with
a docking device;
a hard disk contained within the cartridge shell; and,
a cartridge interface coupled with the hard disk and adapted to connect to the
30 docking device and communicatively link with a host device.

Claim 27 (previously presented). The storage media of claim 26 further comprising a
power supply contained within the cartridge shell.

Claim 28 (previously presented). The storage media of claim 26 further comprising a read/write device contained within the cartridge shell.

Claim 29 (withdrawn). The storage media of claim 26 wherein the tape cartridge form factor is a Digital Audio Tape (DAT).

Claim 30 (withdrawn). The storage media of claim 26 wherein the tape cartridge form factor is Digital Data Storage (DDS).

Claim 31 (previously presented). The storage media of claim 26 wherein the tape cartridge form factor is a Digital Linear Tape (DLT).

Claim 32 (withdrawn). The storage media of claim 26 wherein the tape cartridge form factor is a Linear Tape Open (LTO).

-- End of Claims Appendix --

(Continued on next page.)

9. Evidence Appendix:

No evidence is submitted in the Evidence Appendix.

10. Related Proceedings Appendix:

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No evidence is submitted in the Related Proceedings Appendix.